



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/017,428	12/14/2001	Scott Swix	BS01042	6351

7590  
Scott P Zimmerman  
P O Box 3822  
Cary, NC 27519

07/20/2007

EXAMINER
----------

SHEPARD, JUSTIN E

ART UNIT	PAPER NUMBER
----------	--------------

2623

MAIL DATE	DELIVERY MODE
-----------	---------------

07/20/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/017,428

Applicant(s)

SWIX ET AL.

Examiner

Justin E. Shepard

Art Unit

2623

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 20 June 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Arguments***

Applicant's arguments filed 6/20/07 have been fully considered but they are not persuasive.

Page 8, paragraph starting with "Moreover":

The applicant argues that Goodman does not disclose transmitting the entire transport layer, and instead transmits a single program. On Column 4 (lines 19-30), Goodman discloses that the STB selects one of the programs carried in the 6 MHz channel. The examiner interprets this as being equivalent to transporting the entire transport layer.

The remaining arguments are moot as they deal with the idea that Goodman does not disclose transmitting an entire transport layer, which was answered above.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1-4, and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Goodman in view of Hylton (US Patent Number 5,708,961).

Referring to claim 1, Goodman discloses a digital residential entertainment system (figure 2), comprising:

a media server tuning to a transport layer and transmitting the entire transport layer, rather than a single program stream, over a system bus (figure 2, part 200; figure 9, part 903; column 19, lines 22-28; column 15, lines 1-7; column 13, lines 42-46);

a broadband input/output module receiving the transport layer from the system bus and sending the transport layer to a network bus (figure 7; figure 9, part 909);

a network input/output module receiving the transport layer from the network bus (figure 7; figure 8, part 827);

a demultiplexer that receives the transport layer and that demultiplexes the transport layer (figure 8, part 827); and

a decoder that decodes the demultiplexed and decrypted transport layer (figure 8, part 829).

Goodman does not disclose a system wherein the receiver contains a decryption module that receives the transport layer from the network input/output module and that decrypts the transport layer.

In an analogous art, Hylton teaches a system wherein the receiver contains a decryption module that receives the transport layer from the network input/output module and that decrypts the transport layer (figure 1, part 101; column 19, lines 1-2).

At the time of the invention it would have been obvious for one of ordinary skill in the art to add the decryption module to the receiver as taught by Hylton to the system disclosed by Goodman. The motivation would have been that by having the descriptor located in the receiver instead of the server (as disclosed in Goodman), the device would be able to allow for the encryption to be broken by a user inserted card, which

would allow for future upgrades the encryption to be performed by the user, saving in upgrade costs while keeping current with the current encryption techniques (Hylton: column 19, lines 6-10).

Referring to claim 2, Goodman discloses a digital residential entertainment system of claim 1, further comprising a digital-to-analog converter that converts the decoded transport layer to analog signals (figure 8, parts 837 and 839).

Referring to claim 3, Goodman not discloses a digital residential entertainment system of claim 1, further comprising a conditional access system that restricts access to media services offered via the transport layer to authorized customers (column 19, lines 39-46), and wherein the decoder is connected to a media bus and the decoder sends the decoded, multiplexed, and decrypted transport layer to the media bus (figure 8, line connecting parts 829 and 835).

Referring to claim 4, Goodman disclosing a digital residential entertainment system of claim 3, wherein the transport layer includes multiple program signals (column 4, lines 19-30).

Goodman does not disclose a digital residential entertainment system of claim 3, wherein the conditional access system comprises a card reader and an access card.

In an analogous art, Hylton teaches a digital residential entertainment system of claim 3, wherein the conditional access system comprises a card reader and an access card (figure 1, part 101; column 19, lines 1-2 and 6-10).

At the time of the invention it would have been obvious for one of ordinary skill in the art to add the decryption card to the receiver as taught by Hylton to the system disclosed by Goodman. The motivation would have been to allow for future upgrades the encryption to be performed by the user, saving in upgrade costs while keeping current with the current encryption techniques.

Referring to claim 11, Goodman and Hylton do not disclose a digital residential entertainment system of claim 1, wherein the network input/output module, the decryption module, the demultiplexer and the decoder comprise a computer-readable medium comprising computer-readable instructions, which when executed perform the functions of the network input/output module, the decryption module, the demultiplexer and the decoder.

The examiner takes Official Notice that it is notoriously well known in the art to use software run on a processor replace functions performed by individual ASICs.

At the time of the invention it would have been obvious for one of ordinary skill in the art to use software running on a processor to replace the ASICs disclosed by Goodman and Hylton. The motivation would have been that using an off the shelf processor is a cheaper alternative to using ASICs.

2. Claims 12, 14, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Goodman in view of Hylton in view of Florin.

Referring to claim 12, Goodman discloses digital residential entertainment system, comprising:

a tuner receiving and demodulating a plurality of transport layers, tuning to a specific transport layer identified by a decoder and sending the entire identified transport layer, rather than a single program stream, over a system bus (figure 2, part 200; figure 9, part 903; column 19, lines 22-28; column 15, lines 1-7; column 13, lines 42-46);

a broadband input/output module receiving the transport layer from the system bus and sending the transport layer to a network bus (figure 7; figure 9, part 909);

a network input/output module connected to the network bus and retrieving the transport layer from the network bus (figure 7, line connecting part 201 and 702; figure 8, part 827);

a demultiplexer that receives the decrypted transport layer and that demultiplexes the transport layer (figure 8, part 827); and

another decoder connected to the demultiplexer that decodes the demultiplexed and decrypted transport layer (figure 8, parts 827 and 829).

Goodman does not disclose a system that contains an array of tuners and a broadband input/output module connected to a system bus; and a decryption module connected to the network input/output module and the demultiplexer that receives the

transport layer from the network input/output module and that decrypts the transport layer.

In an analogous art, Hylton teaches a system that contains an array of tuners (figure 7, parts 11-14); and a decryption module connected to the network input/output module and the demultiplexer that receives the transport layer from the network input/output module and that decrypts the transport layer (figure 1, part 101; column 19, lines 1-2; figure 7).

At the time of the invention it would have been obvious for one of ordinary skill in the art to add the array of tuners and the decryption module to the receiver as taught by Hylton to the system disclosed by Goodman.

The motivation for adding the array of tuners would have been to enable the system to choose from more than one transport layer, thereby adding more viewing options for the user and making the system more enticing.

The motivation for adding the decryption module would have been that by having the descriptor located in the receiver instead of the server (as disclosed in Goodman), the device would be able to allow for the encryption to be broken by a user inserted card, which would allow for future upgrades the encryption to be performed by the user, saving in upgrade costs while keeping current with the current encryption techniques (Hylton: column 19, lines 6-10).

Goodman and Hylton do not disclose a system wherein the tuner and broadband input/output modules are connected by a system bus.



In an analogous art, Florin teaches a system wherein the tuner and broadband input/output modules are connected by a system bus (figure 2).

At the time of the invention it would have been obvious for one of ordinary skill in the art to add the system bus taught by Florin to the system disclosed by Goodman and Hylton. The motivation would have been to enable the system to use an off the shelf general purpose controller to save on developmental costs.

Referring to claim 14, Goodman discloses a digital residential entertainment system of claim 12, further comprising a digital-to-analog converter that converts the transport layer to analog signals (figure 8, parts 837 and 839), and wherein the digital-to-analog converter is connected to a media bus and the digital-to-analog converter sends the decoded, multiplexed, and decrypted transport layer to the media bus (figure 8).

Referring to claim 15, Goodman discloses a digital residential entertainment system of claim 12, further comprising a conditional access system connected to the another decoder that restricts access to media services offered via the transport layer to authorized customers (column 19, lines 39-46; figure 8).

3. Claims 5-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Goodman in view of Hylton as applied to the claims above, and further in view of Rajakarunanajake.

Referring to claim 5, Goodman discloses a digital residential entertainment system of claim 3, further comprising an Ethernet switch connected to the network bus and that receives the transport layer from the network bus (figure 6, part 201).

Goodman and Hylton do not disclose a digital residential entertainment system of claim 3, wherein the conditional access system comprises a secured network conditional access system.

In an analogous art, Rajakarunanajake teaches a digital residential entertainment system of claim 3, wherein the conditional access system comprises a secured network conditional access system (column 7, lines 44-47).

At the time of the invention it would it have been obvious for one of ordinary skill in the art to use the IPsec connection taught by Rajakarunanajake to the system disclosed by Goodman and Hylton. The motivation would have been that following known standards is a way to save development costs by implementing something that is already known to work.

Referring to claim 6, Goodman and Hylton do not disclose a digital residential entertainment system of claim 5, wherein the secured network conditional access system comprises a secured Internet Protocol (IP) connection to an authentication service provider.

In an analogous art, Rajakarunanajake teaches a digital residential entertainment system of claim 5, wherein the secured network conditional access system comprises a

secured Internet Protocol (IP) connection to an authentication service provider (column 7, lines 44-47).

At the time of the invention it would it have been obvious for one of ordinary skill in the art to use the IPsec connection taught by Rajakarunanajake to the system disclosed by Goodman and Hylton. The motivation would have been that following known standards is a way to save development costs by implementing something that is already known to work.

Referring to claim 7, Goodman and Hylton do not disclose a digital residential entertainment system of claim 6, wherein the secured Internet Protocol (IP) connection is an IPsec connection.

In an analogous art, Rajakarunanajake teaches a digital residential entertainment system of claim 6, wherein the secured Internet Protocol (IP) connection is an IPsec connection (column 7, lines 44-47).

At the time of the invention it would it have been obvious for one of ordinary skill in the art to use the IPsec connection taught by Rajakarunanajake to the system disclosed by Goodman and Hylton. The motivation would have been that following known standards is a way to save development costs by implementing something that is already known to work.

Referring to claim 8, Goodman does not disclose a digital residential entertainment system of claim 5, wherein the secured network conditional access system comprises a broadband connection to an authentication service provider.

In an analogous art, Hylton teaches a digital residential entertainment system of claim 5, wherein the secured network conditional access system comprises a broadband connection to an authentication service provider (column 40, lines 13-17).

At the time of the invention it would it have been obvious for one of ordinary skill in the art to use the VPC connection taught by Hylton to the system disclosed by Goodman. The motivation would have been that following known standards is a way to save development costs by implementing something that is already known to work.

Referring to claim 9, Goodman does not disclose a digital residential entertainment system of claim 8, wherein the broadband connection is a private virtual circuit (PVC) connection.

In an analogous art, Hylton teaches a digital residential entertainment system of claim 8, wherein the broadband connection is a private virtual circuit (PVC) connection (column 40, lines 13-17).

At the time of the invention it would it have been obvious for one of ordinary skill in the art to use the VPC connection taught by Hylton to the system disclosed by Goodman. The motivation would have been that following known standards is a way to save development costs by implementing something that is already known to work.

4. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Goodman in view of Hylton in view of Florin as applied to claim 12 above, and further in view of Rajakarunajake.

Referring to claim 16, Goodman and Hylton do not disclose a digital residential entertainment system of claim 12, wherein the transport layer is an Ethernet transport layer.

In an analogous art, Rajakarunanajake teaches a digital residential entertainment system of claim 12, wherein the transport layer is an Ethernet transport layer (column 7, lines 44-47).

At the time of the invention it would it have been obvious for one of ordinary skill in the art to use the Ethernet transport layer taught by Rajakarunanajake to the system disclosed by Goodman and Hylton. The motivation would have been that transmitting data with Ethernet cable is a cheap way to transmit data on a network.

5. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Goodman in view of Hylton as applied to claim 1 above, and further in view of D'Luna.

Referring to claim 10, depending on claim 1, Goodman, Hylton, and Florin fail to teach the decrypting, demultiplexing and decoding functions are integrated into a single chip.

In an analogous art D'Luna teaches the decrypting, demultiplexing and decoding functions are integrated into a single chip (figure 2, part 106; paragraph 91, lines 1-2).

At the time the invention was made it would have been obvious for one skilled in the art to modify the combined systems of Goodman, Hylton, and Florin using the integrated signal chip of D'Luna for the purpose of making the set top box more compact or smaller.

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Goodman in view of Hylton in view of Florin as applied to claim 12 above, and further in view of Lorenz.

Referring to claim 13, Goodman, Hylton, and Florin do not disclose a digital residential entertainment system of claim 12, wherein the decoder is part of a thin client set top box.

In an analogous art, Lorenz teaches a digital residential entertainment system of claim 12, wherein the decoder is part of a thin client set top box (paragraph 96).

At the time of the invention it would have been obvious for one of ordinary skill in the art to use the thin client STB taught by Lorenz in the system disclosed by Goodman, Hylton, and Florin. The motivation would have been to enable the cheaper hardware to be included in the user's receiver and install the more expensive hardware in the single server.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Justin E. Shepard whose telephone number is (571) 272-5967. The examiner can normally be reached on 7:30-5 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Kelley can be reached on (571) 272-7331. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2623

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JS

  
CHRIS KELLEY  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600